Gunter, Jason

From: Gunter, Jason
Sent: Tuesday, April 22, 2014 8:21 AM
To: Robert Hinkson; Wiles, Brandon
Cc: Adam Nanney; Mark Nations; Bodnar, Gen
Subject: FW: Draft Pond Design
Attachments: Draft Pond Design.pdf

Bob,

I have attached Adam's email from November. I was under the impression that the design is still draft and is currently under review by DSP so I haven't considered it final. If you guys have comments on the design please feel free to discuss today during our meeting or submit them to me asap.

Thanks,

Jason

From: Adam Nanney [mailto:ANanney@barr.com]
Sent: Monday, November 04, 2013 8:50 AM
To: Gunter, Jason
Subject: Draft Pond Design

Jason,

Gen with Doe Run requested that I send this on to you. Attached is the Pond Design that we came up with. DSP has been reviewing it for a while, so if they have comments it will not be the final document. But in case it is discussed this Wednesday at the meeting you can get a look ahead of time.

Once we know if DSP has any comments, I will get you a final design document.

Thanks

Adam Nanney, PE

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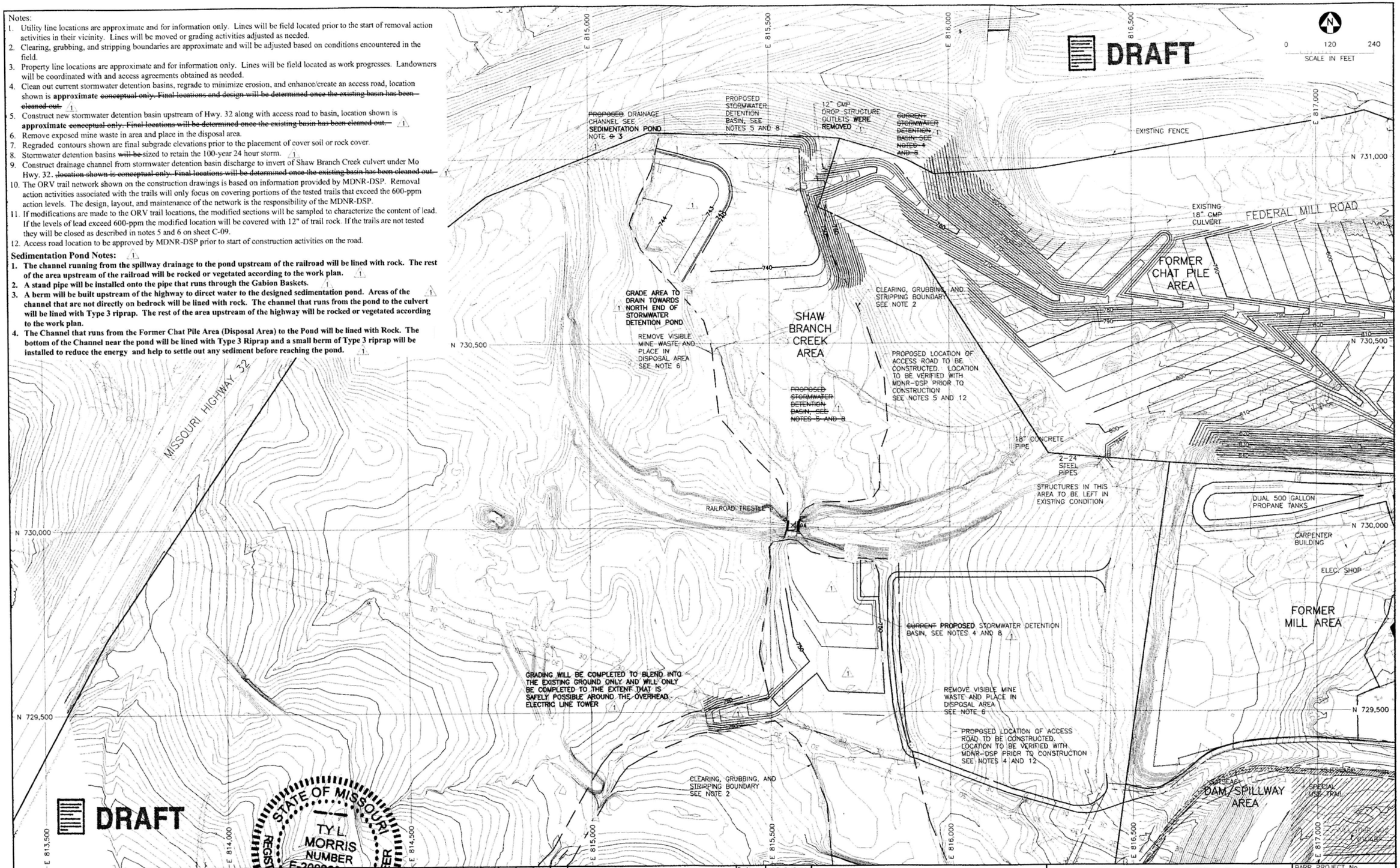
Notes:

1. Utility line locations are approximate and for information only. Lines will be field located prior to the start of removal action activities in their vicinity. Lines will be moved or grading activities adjusted as needed.
2. Clearing, grubbing, and stripping boundaries are approximate and will be adjusted based on conditions encountered in the field.
3. Property line locations are approximate and for information only. Lines will be field located as work progresses. Landowners will be coordinated with and access agreements obtained as needed.
4. Clean out current stormwater detention basins, regrade to minimize erosion, and enhance/create an access road, location shown is **approximate** ~~conceptual only. Final locations and design will be determined once the existing basin has been cleaned out.~~ 1
5. Construct new stormwater detention basin upstream of Hwy. 32 along with access road to basin, location shown is **approximate** ~~conceptual only. Final locations will be determined once the existing basin has been cleaned out.~~ 1
6. Remove exposed mine waste in area and place in the disposal area.
7. Regraded contours shown are final subgrade elevations prior to the placement of cover soil or rock cover.
8. Stormwater detention basins ~~will be~~ sized to retain the 100-year 24 hour storm. 1
9. Construct drainage channel from stormwater detention basin discharge to invert of Shaw Branch Creek culvert under Mo Hwy. 32. ~~location shown is conceptual only. Final locations will be determined once the existing basin has been cleaned out.~~ 1
10. The ORV trail network shown on the construction drawings is based on information provided by MDNR-DSP. Removal action activities associated with the trails will only focus on covering portions of the tested trails that exceed the 600-ppm action levels. The design, layout, and maintenance of the network is the responsibility of the MDNR-DSP.
11. If modifications are made to the ORV trail locations, the modified sections will be sampled to characterize the content of lead. If the levels of lead exceed 600-ppm the modified location will be covered with 12" of trail rock. If the trails are not tested they will be closed as described in notes 5 and 6 on sheet C-09.
12. Access road location to be approved by MDNR-DSP prior to start of construction activities on the road.

Sedimentation Pond Notes: 1

1. **The channel running from the spillway drainage to the pond upstream of the railroad will be lined with rock. The rest of the area upstream of the railroad will be rocked or vegetated according to the work plan.** 1
2. **A stand pipe will be installed onto the pipe that runs through the Gabion Baskets.** 1
3. **A berm will be built upstream of the highway to direct water to the designed sedimentation pond. Areas of the channel that are not directly on bedrock will be lined with rock. The channel that runs from the pond to the culvert will be lined with Type 3 riprap. The rest of the area upstream of the highway will be rocked or vegetated according to the work plan.** 1
4. **The Channel that runs from the Former Chat Pile Area (Disposal Area) to the Pond will be lined with Rock. The bottom of the Channel near the pond will be lined with Type 3 Riprap and a small berm of Type 3 riprap will be installed to reduce the energy and help to settle out any sediment before reaching the pond.** 1



NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
2	CMS2	TLM	TLM	07/13/11	ADDRESSING COMMENTS AND EDITORIAL REVISIONS
1	CMS2	AJN	TLM	10/18/13	SEDIMENTATION DESIGN

CLIENT								
BID								
CONSTRUCTION	5/23/11	7/13/11	10/18/13					
EPA	5/23/11	7/13/11	10/18/13					
RELEASED TO/FOR	A	B	C	0	1	2	3	
	DATE RELEASED							

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Scale	AS SHOWN
Date	3/23/11
Drawn	CMS2
Checked	AJN
Designed	AJN
Approved	TLM

THE DOE RUN COMPANY

FEDERAL MINE TAILINGS SITE
PARK HILLS, MISSOURI

SOUTH SHAW BRANCH CREEK AREA

BARR PROJECT No. 25/86-0006
CLIENT PROJECT No.
DWG. No. C-04
REV. No. C